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Dear Cooperator:

"Must Know Soil To Get Crops:" Here's
How Man Gets Better Than Average Crop

Many Stock Water Dams Constructed In
Tri-County Soil Conservation District

Joe W. Smith, who lives three and one-half miles north of Wolsey and is a cooperator in the Huron project area, has grown a crop of corn that will yield better than 30 bushels per acre. This crop was grown on land that was not plowed last spring but on a field that was surface tilled to kill the weeds and then subsoiled in the planter rows. It may sound a little unusual and strange, but here is what Mr. Smith says:

"A farmer must know his soil like a doctor knows his patient and then treat it accordingly. I have found that this sandy soil should not be turned over with a plow as often as it has been in the past. I used to plow my land; both deep and shallow. The last few years I have worked the stubble into the soil more gradually. I know now that the duckfoot or knife-like blade machines are a decided improvement over the disk. The machines kill weeds and keep the stubble on or near the surface to serve as a mulch which protects the land from the sun and winds and helps hold moisture."

The Tri-County District, which is now more than a million acres in size, has done much to relieve the stock water shortage that was a problem in the area. These dams have been constructed with equipment borrowed from the Soil Conservation Service. Much of the range area now averages ten dependable stock water dams per township. Figures just released by the district show:

No. dams built	120
No. cubic yards earth fill	132,000
Acre feet of storage	993
Average size stock dam:	
Cubic yards earth fill	1,100
Acre feet storage	8.3
Average cost per dam to operator	\$77.00
Average cost per acre feet storage to the operator	\$9.30

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The Brown-Marshall District was included in the tour of the State Land Use Planning Committee during the latter part of October. Results of the conservation work in this area were seen and discussed. The state group was well impressed with the progress of the area.

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Pennington District Already Has One-Quarter of Operators Signed Up

The Pennington Soil Conservation District, which is the youngest district in the state, has already received applications from twenty-one ranchers in the area. Water and soil conservation plans have been completed on eleven of these units. There are only 99 operators within the boundaries of this district and the supervisors have set a goal of 60 farm plans for the first year's operation.

General educational meetings will be held throughout the winter months. Group meetings for agreement writing will be held in three areas in the district for making plans on the individual farm units. These plans will consider farm budgeting as well as conservation practices.

A study made by the supervisors shows that the area is subject to recurring droughts. As a result of this condition they have come to the conclusion that water conservation will be the main objective of the district operations program. They also expect to encourage the reorganization of individual units on a livestock basis. Supplemental to this will be increased acreages of drought-resistant crops. The supervisors plan to meet every two weeks to carry on the administrative duties of the district.

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Rookies in the SCS-CCC Camp at Alcester were shown a number of colored slides depicting conservation practices in their area as a part of their orientation course. The showing of these pictures was arranged by Taylor Solem, Camp Superintendent, who thought that pictures of the work done by previous enrollees might be inspirational to the new boys as well as acquaint them with the meaning of soil conservation.

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Late Growth Arouses Interest in Grass

Fall growth of Crested wheat grass is reviving interest in grass seeding on the Clearfield-Keyapaha Soil Conservation District. The first seeding on the district, made in the fall of 1939, made good early spring growths, but the dry weather and grasshoppers caused the stands to disappear during the latter part of July and through August. Early rain in September started an early fall growth that now stands up from 4 to 6 inches over most of the seeded areas. Farmers now, after inspecting the growth, are very anxious to do seeding this fall on their abandoned fields.

D. B. Lyons, Chairman of the Board of Supervisors, stated that there would be about 2,500 acres seeded on cooperators' farms this fall.

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Is Enthusiastic About Water Spreading

The Water Facilities program is still operating in the state and much progress has been made. The following story from Walworth county is typical of the benefits that have been derived from this phase of the Soil Conservation Service activities:

"Dean Boehmer of Akaska, one of the cooperators in the Water Facilities Program, has had excellent results with a dam that he constructed a year ago. He had a heavy rain there about a month ago and a large amount of water ran over the spillway and spread over about 40 acres of prairie hay land. The water remaining in the stock pond may be used to flood 40 or 50 acres below the dam. He has a pipe through the dam for this purpose and expects to spread this water on the land sometime this fall. Mr. Boehmer is very enthusiastic and pleased with this fine dam and water spreader system."

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Strip Cropping Provides Better Chance
To Control Grasshoppers, Thinks Farmer

Dewey Schlitz, a cooperator with the SCS-CCC Camp at Huron, thinks a lot of the strip cropping on his farm south-east of Wessington. He recently made the following comments:

"Contrary to the common grasshopper argument, I find that I can do a better job of controlling grasshoppers by strip cropping. The reason is that I can use more thorough tillage methods to control 'hoppers with less danger of soil blowing."

Mr. Schlitz also praises strip cropping for increasing his yields as well as for controlling wind erosion. "Before strip cropping my fields," he said, "I would not work my land thoroughly enough for maximum yields. It was easy to disc a crop into the stubble for perhaps two or three years. With strip cropping I have forced myself to thoroughly cultivate the land and to rotate my crops."

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Can Notice Improved Pasture On
Each Side Of Contour Furrows

Contour furrows on the William Raabe farm, north of Tyndall, show results the first year and he is counting upon more grass for his livestock in the future as a result of having placed contour furrows on his pasture land.

Mr. Raabe used a machine known as the "pasture groover" which is nothing more than an old three-bottom lister with the middle beam removed, and with the wings of the moldboard partially out so as not to make too wide a groove or furrow. In fact, these furrows are about five or six inches wide, and approximately the same depth. An ordinary plow or lister can be used with about the same effect.

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Those attending a recent tour had an opportunity to note the results of the furrows in holding moisture, for the grass on each side of the furrow was dark green in color and had greater height. The manner in which furrows trap and hold run-off water for grass use is illustrated by the observation William Raabe made following a recent rain on his place northwest of Tyndall.

He said: "The furrows hold the water up on the slopes of the pasture," and, "that prior to the construction of these furrows a small low spot in my pasture always had water standing in it following a good rain." No water stands in the low spot now and Mr. Raabe, who is one of the five supervisors of the Emanuel-Choteau Creek District, is well pleased with his pasture furrows.

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Double Crop Yields By Using
Deep-Furrow Drill On Contour

Jacob Hieb and his son, Louie, who farm together southwest of Reliance, S. Dak., more than doubled their crop yields in 1940 by using a deep furrow drill on contour farming, they reported. Their barley made 35 bushels per acre, while their neighbors' made only 15 bushels. Their sorghums and oats made above average yields, too.

The Hiebs used a subsurface tiller after harvest, and believe it is going to do much in retaining moisture and destroying grasshopper eggs.

In 1941 they will have every acre of the cropland on the contour. Jacob Hieb says, "It is the only way to farm, as it pays."

Assistance was given in planning and laying out the contour guide lines by the technicians from the American Creek Soil Conservation District, of Lyman County, South Dakota.

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Thirty-Eight Farmers in South Central
Project Plant 4,000 Acres of Wheatgrass

Grass seeding on land purchased by the government is the activity which the farmers and ranchers in the South Central South Dakota Land Use Adjustment Project have been engaged in this fall. It has been no small undertaking either, with more than 4,000 acres of land being seeded to Crested wheatgrass.

The seed has been furnished by the Soil Conservation Service, and the ranchers using the government land have done the seeding. They have very willingly cooperated in this planting program knowing that the improvement of the ranges by grass seeding of this type will be of benefit to the rancher who leases the land.

Thirty-eight different individuals have taken part in this seeding program which is a high percentage of the ranchers still living in the purchase area. Seedings of this nature are a big step toward getting barren acres placed on a productive basis. Large acreages of abandoned crop land have been reseeded in all three of the larger purchase areas in South Dakota during the past years with very good success. Fall seedings of Crested wheatgrass have been unusually successful.

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Harry Kennoche, who lives in the Brule-Buffalo Soil Conservation District and is a cooperator, has some contour pasture furrows that have shown real results. These furrows were plowed about one year ago on only a part of the pasture. This summer the only place in the pasture that grass headed out was on the area furrowed. The extra water held by these furrows resulted in a fine grass growth and have proven the worth of this conservation practice to many of the cooperators in the district.

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Contour Furrows, Stock Dams, Grassing,
Range Management Show Effective Results

Soil conservation practices put on the land in the Fort Meade Camp Area have shown some positive results this year. After a field had been contour furrowed on the H. F. Byers ranch north of Whitewood, Mr. Byers says, "I notice quite a change in this piece of land. The furrows seem quite effective in catching the rain and distributing it around to a better advantage."

The work done on Mr. Byers' place consisted of contour furrows, repair of a stock dam, retirement of land to grass, and a range management program.

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Snow Fence Collects Extra Moisture to
Aid 'Hopper-Damaged Trees to Re-Leaf

Last winter Philip Schwinler, a farmer living three miles north of Winner, cooperated with the Soil Conservation Service in conserving moisture in a newly-planted shelterbelt with the aid of a snow fence with the idea that the reserve moisture would assist in the growth and help the trees go through any drouth period that might come. The 1940 season developed beyond any expectations in that the moisture during the growing season was four inches below normal and heavy swarms of grasshoppers came into the grove during July and completely denuded the trees of leaves. The windbreak looked pretty sick the latter part of July. The effect of the reserve moisture was very noticeable in how quickly most of the trees re-leaved after the grasshoppers left. As a result, there will be a very small loss of trees although the trees did suffer a setback in their growth.

Mr. Schwinler believes that the use of this snow fence was a great help in meeting this emergency.

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Satisfactory Tree Belts Show 84 Percent Survival; 1941 Plantings Being Planned

The survival count of farmstead and field strip tree planting on the Silver Creek Soil Conservation District made in the spring of 1940 indicates an 84 percent survival on belts classed as satisfactory, and a weighted average of 69 percent, considering all plantings. When only the farmstead plantings are considered, an average survival of 80 percent is found. The total area considered is 52 acres, which covers trees on the farms of 18 cooperators. W. R. Jamison, chairman of the District Supervisors, feels that a good start was made after the office in Woonsocket was established, about the first of March, 1940.

In making plans for 1941 plantings, Mr. Jamison states that all field plantings will be made by the Prairie States Shelterbelt Project on farms on which agreements have been signed by the district. The farmstead plantings will be made by the district with the trees furnished jointly by the farmer and the district. It is anticipated that about 140 acres of farmstead plantings and no less than 20 miles of field plantings will be made on the district in 1941.

In order to have all plans well laid this fall it is very important that all applications for trees through the Silver Creek District and Prairie States Shelterbelt Project be in as soon as possible.

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The supervisors of the Clay County Soil Conservation District toured their district area and observed the progress of conservation measures last month. They visited a number of farms and discussed ways and means of improving the program. This district is relatively new but progress has been very rapid. The supervisors also discussed the educational calendar of events for the next year.

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Charles Horton is an old time operator in the Land Use Adjustment Area in Pennington County. He feels that the program has helped to stabilize the range livestock industry by: Blocking out grazing land; controlling grazing; eliminating fencing costs; eliminating competitive bidding; constructing stock watering places; seeding grasses; reducing financial burdens of local governments and relocating farm families.

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Conservation Service Buys 113,435 Acres Of Land; To Develop Controlled Grazing

The purchase of 113,435 acres of land by the Soil Conservation Service has been completed on the Perkins-Corson Land Use Adjustment Project located in Northern Perkins County and Southwestern Corson County. Options have been accepted on an additional 36,522 acres, most of which will be paid for by next spring.

Plans are made to have five summer pastures ready for use by 1941. This land has been purchased in blocks in the rougher portions of the project area to establish summer pastures under a program of controlled grazing. WPA labor is utilized to develop the lands and get the pastures ready for use by local ranchers.

Development work in the area includes: 3,000 acres seeded to Crested and Western wheatgrasses; 62 miles of fences constructed; 4 dams built, 2 springs developed, and 1 water hole improved.

Eight thousand acres of grass seeding is being done this fall. The Grand River Cooperative Grazing District has been organized to administer the summer grazing pastures. Range survey has been made of the pasture areas. Technical assistance is being given to ranchers who wish to carry out soil and moisture conservation practices.

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